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I, LEANNE MYNOTT, TEAM LEADER EXAMINATION SUPPORT AND SALES hereby certify that annexed is a true copy of the Provisional specification in connection with Application No. PP 9280 for a patent by HUGH WILLIAM BRAMWELLS filed on 17 March 1999.

WITNESS my hand this
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PROVISIONAL SPECIFICATION

for the invention entitled:

"Shielding Assembly"

The invention is described in the following statement:

- 1A -

SHIELDING ASSEMBLY

The present invention relates to a shielding assembly. In particular, the invention relates to a shielding assembly which is adapted to shield a user or users from sun and/or
5 wind.

Conventionally, protection from the sun or wind has been generally achieved using umbrellas, such as large beach umbrellas. For shielding from the sun, these are generally placed in a stand or dug into the sand on a beach so that they are in a fixed position, generally
10 with the umbrella shaft being in a substantially vertically orientation. Shielding from the wind with umbrellas may also be seen, for example on the beach, where they are placed on their side in an attempt to provide protection to users seated inside the cover of the umbrella.

Protection from the sun has also been achieved using small marquee arrangements
15 where a cover is strung over several struts. Once again, this arrangement is generally fixed in position. Further, assemblies have been suggested which are similar to small tents, some of which may have a "spring-open" arrangement for easy construction. These assemblies may provide both sun and wind protection. In all of these arrangements the assembly is substantially static.

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The invention advantageously provides an assembly which is adjustable to shield a user from the sun under various conditions, and which optionally may also provide shielding from wind. The shielding from the wind is advantageously independent of the sun shielding operation of the assembly.

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According to the present invention there is provided a shielding assembly comprising:

shielding means for shielding a user from the sun; and

support means for supporting the shielding means;

wherein the shielding means is moveably mounted relative to the support means such
30 that its position relative to the support means can be altered to facilitate tracking of the

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movement of the sun.

The support means, shielding means and attachment of the shielding means to the support means may take any suitable configuration. In particular, the support means may
5 comprise any suitable number of support struts, the shielding means may be of any suitable shape or size, and the attachment between the two may be any suitable attachment provided that the shielding means is moveable relative to the support means.

In one embodiment the support means comprises a single arch support or a pair of arch
10 supports, and the shielding means comprises a shield which is mounted on the arch support such that the shield can track along the arch support to provide optimal shielding from the sun. In this embodiment, the shield may be mounted on the inner or outer surface of the arch support, and may be rotatable about the arch support. Further, the shield is preferably mounted such that it is lockable relative to the arch support.

15

According to this embodiment, as stated above, the shield may be mounted relative to the support by any suitable means. The mounting may, for example, comprise a single point of contact between the shield and the support, or may comprise a plurality of points of contact or a track on the shield which runs along the support. Other alternatives will be
20 readily ascertained and determined by those skilled in the art. Further areas may also be attached to provide further shielding, for example from wind, or to provide netting to protect a user from insects.

According to another embodiment, the support means comprises a frame having 3 or
25 more support struts, wherein the shielding means comprises a shield which is movably mounted within or outside the three or more support struts.

Taking, for example, an arrangement where the support means comprises three struts, the shield may comprise a triangular shield, each corner of which is adapted to run along a
30 respective strut. Alternatively, each of the corners may be detachable and reattachable to a

respective strut. This arrangement may also hold true for a circular or elliptical shield having three points of contact which contact a respective strut, and which are moveable along that strut and/or detachable and attachable to that strut. In yet another alternative, the shielding means may comprise a convex dome which is moveable within the struts of the support as
5 desired. It will be recognised that in this embodiment, the material of the shield may necessarily be elasticised to ensure that movement of the shield is possible. For example, if the shield is triangular as two points of the triangular sheet are moved down two respective struts, the distance between the struts increases, thus the material must expand. Alternatively, taking this same example, each of the corners of the triangular sheet may be attached to an
10 elastic cord which is in turn attached to the respective struts. In this case the triangular sheet could remain static, and the elastic cords extend as moved down the struts. Other alternatives will be readily determined by those skilled in the art.

Preferably, according to some embodiments, the shield is rotatable around its
15 circumference which is, as described in the preceding paragraphs, lockable with respect to the struts of the support.

According to this embodiment, the shield, be it triangular, circular, elliptical or convex, may also be hung from the support beams, preferably using a pulley system such that
20 a user of the assembly can alter the orientation of the shield with minimal effort. In this case, there is advantageously further provided means for retaining the shield in the desired position as set by the user of the assembly.

The struts of the support are preferably flexible, and may be tapered toward the top
25 of the assembly to provide greater curvature. Furthermore, the struts may be connected at the top of the support by a joiner. For example, in the case of a three-strut support, the joiner would be a "Y-shaped" joiner. Advantageously, for storage purposes, the struts may fold into two or more segments, for example, as is the case in conventional tent poles.

30 According to a further embodiment, the support means comprises a pair of arch

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supports which are positionable at 90° to each other, and which are movable relative to each other. This may be achieved using two individual arch supports, or a single continuous loop which is constructed to provide a cross arrangement. In this case, the shielding means advantageously comprises a shield which is mounted on each of the arch supports. Each of
5 the supports, may advantageously be moved relative to, and substantially around the axis of, the other support. In this case, therefore, the shielding means is moveably mounted relative to each of the individual arch supports. It will be understood that both supports may be moved simultaneously if desired to reposition the shielding means.

10 In a preferred embodiment, the shielding assembly, be it configured as described in any one of the above embodiments, comprises a wind shield means. This may be integral with the assembly, or may be an additional attachment to the assembly, depending on the configuration of the assembly. For example, if the assembly comprises 3 or more struts, the wind shield means may comprise a shield which is mounted between the lower portions of the
15 struts around at least a part of the outer perimeter of the shelter. According to this embodiment, the wind shield may comprise pockets for receiving, for example, sand or water which stabilises the wind shield and/or assembly.

In a preferred embodiment, the wind shield means comprises a wind shield which is
20 moveably mounted, or which is mountable, relative to the shielding assembly, such that its position can be altered depending on the direction of the wind. For example, the wind shield may comprise a triangular arch which is attached to the shielding assembly at a point, and which is rotatable about the outer perimeter of the assembly. Preferably, the wind shield comprises locking means for locking the windshield in a position relative to the shielding
25 assembly. Further, in certain embodiments the attachment of the shield may comprise an extended spine which is adapted to be slidably attached to the assembly, or which alternatively is independent of the assembly.

When the wind shield comprises a triangular arch, this preferably includes a
30 longitudinal spine which is substantially central to the windshield. When in this

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configuration, in use the shield may be positioned such that the spine faces the prevailing wind, and thereby forms a more efficient wind break to the user of the assembly. In particular, the tapered sides and curvature of the shield arch advantageously such that optimal deflection of the wind is achieved.

5

The shielding assembly may be secured to the ground by any suitable means. This may be somewhat dependent on the particular configuration of the support means. For example, if the support means comprises a single arch support, it may be necessary to secure the assembly using guy wires attached to the arch support. If the support means comprises
10 3 or more struts, it may be more suitable to provide bags on each foot of the struts, the bag being adapted to receive, for example, sand or water. These and other means of securing the shielding assembly will be readily ascertained by a person in the art.

The assembly may also comprise additional attachments such as a canopy for
15 protection from rain, or netting for protection from insects. Furthermore, a flow may be provided in various embodiments of the assembly.

For ease of assembly, as briefly mentioned above, the arch support(s) of each of the above embodiments are preferably adapted too be assembled using an internal pull-cord or
20 elastic cords, or may be constructed to facilitate spring-loaded assembly.

Particular embodiments of the present invention will now be described with reference to the accompanying drawings in which :

25 Figure 1 illustrates an embodiment of the shielding assembly;
Figure 2 illustrates an alternative embodiment of the shielding assembly;
Figure 3 illustrates an alternative configuration to the embodiment shown in
Figure 2;
Figure 4 illustrates an alternate configuration of the shielding assembly shown
30 in Figure 2;

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Figure 5 illustrates the shielding assembly shown in Figure 3 including a wind shield;

Figure 6 illustrates the shielding assembly shown in Figure 3 including an alternate wind shield;

5 Figure 7 illustrates a further alternate configuration of the embodiment shown in Figure 2;

Figure 8 illustrates the shielding assembly shown in Figure 2 including a moveable wind shield;

Figure 9 illustrates the wind shield shown in Figure 8; and

10 Figure 10 illustrates an alternate shielding assembly.

Referring to Figure 1, the shielding assembly 10 comprises a single arch support 11, on which is mounted a circular shield 12. The shield 12 is mounted on the support 11 at point X. This mounting is such that the shield 12 is moveable along the support 11 as shown
15 by the phantom shields 13. As such, the shield 12 is moveable, and lockable, along the length of the support 11. The shield 12 may be provided with a cross bar, the shield 12 being mounted on the support 11 via the cross bar, and the cross bar tracks along the support 11.

The support 11 in Figure 1 is secured to the ground by guy wires 14. The support 11
20 may also be tilted toward the ground by adjusting the guide wires 14 such that the shield 12 may be moved relative to the support 11 at a suitable elevation from the ground relative to the sun's elevation in the sky. As the operation of this embodiment will be simplified if the axis of the support is aligned with the path of the sun, the assembly may also be provided with a compass to facilitate optimal orientation in setting up of the assembly relative to the
25 sun's path.

It will be understood that the assembly illustrated in Figure 1 may also comprise a pair of parallel supports, optionally joined at each end to provide additional support and strength to the assembly. Further, additional arches may provide support for other desirable features,
30 such as a netting shield. In this embodiment, the shield may be detachable and mountable on

any of the arches, including the additional arches.

Figure 2 illustrates a shielding assembly 20 which comprises three strut supports 21, each of which is secured to the ground by any suitable means, for example a sandbag tied to the base of each strut 21. The shield 22 comprises a triangular sheet which is attached to each of the struts 21 at the points of the triangular shield 22. The connection between the shield 22 and each of the struts 21 may be such that the points of the shield are moveable relative to each of the respective struts, or may be detachable and reattachable to respective struts. As such, the shield 22 is moveable relative to the struts 21 so that it may be positionable taking into consideration the position of the sun in the sky (the incident rays of the sun being shown by arrows in Figure 2). It will be recognised that the shield 22 material in this example will necessarily be elastic to facilitate movement of the shield up and down the struts 21.

The struts 21 are joined by a connection 23 at the top of the assembly 20. This may be a separate connector, or may simply be a hinge to which each of the struts 21 is hingedly attached. Furthermore, the connector 23 and struts 21 may be configured such that the assembly 20 can be erected automatically by releasing a spring loaded system. The struts 21 may alternatively each have an internal cord, each of the cords being connected to a single pull-cord. In this case, on pulling the pull-cord, the assembly may be erected by activating each of the individual cords of respective struts.

Figure 3 illustrates the embodiment of Figure 2, but has a circular shield 32 rather than the triangular shield 22 illustrated in Figure 2. In this case, the attachment of the shield 32 to struts 31 is advantageously such that a degree of rotational movement of the shield 32 about the struts 31 is facilitated. Similarly, Figure 4 illustrates an embodiment where the shield 42 is a convex shield.

Figures 5 and 6 illustrate the shield assembly of Figure 3, but additionally include a wind shield 55 and 65 respectively. The wind shield 55 illustrated in Figure 5 extends

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between the struts 51 of the shielding assembly 50. The wind shield 55 is illustrated as extending between two faces of the assembly 50, but may also suitably extend on only one face, or on all three faces of the assembly 50. The wind shield 55 further advantageously includes pockets 56, for example for receiving sand when the assembly 50 is used on the beach. The wind shield 65 shown in Figure 6 extends between two struts 61, and covers an entire face of the assembly 60. The wind shield 65 may extend over two faces if desired, and may be provided with a fold down zipped door 66 if desired.

Referring to Figure 7, the shield 72 may be hung from the assembly 70 by means of a support system 76, for example a pulley system. As such, the actual shield 72 may be mounted to the assembly 70 indirectly by the support system 76. The support assembly 76 is such that the orientation of the shield 72 relative to the struts 71 which support the assembly 76 may be altered as desired in accordance with the discussion above. Furthermore, points of the shield 72 may be attached to respective struts 71 when the shield 72 is in a desired orientation.

Figure 8 illustrates a particularly desirable arrangement where the shielding assembly 80 is substantially in accordance with that shown in Figures 2 to 7. The shield has been omitted from Figure 8 for convenience. As shown in this Figure, the assembly 80 is provided with a wind shield 85 which is attached to the assembly 80 at the connection of the struts 81. This connection 83 advantageously facilitates rotation of the wind shield 85 about the perimeter of the assembly 80. It is envisaged that this arrangement may also be suitable for use on the assembly illustrated in Figure 1, where the wind shield 85 would actually provide a stabilising effect to the assembly.

25

Referring to Figure 9, the wind shield 95 preferably includes a central longitudinal spine 96 which extends from the top of the shield 95 to the base thereof. This spine advantageously provides improved shielding against prevailing winds as the wind is literally divided to pass around the assembly to which the shield 95 is connected. The shield assembly 95 may be reinforced if necessary with lateral supports, and may include means for securing

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the wind shield 95 to the ground when the wind assembly 95 is oriented in a desired position. A pivot 97 may be provided to attach the wind shield 95 to the assembly. Alternatively, the pivot is not included and the spine 96 extends to form a complete arc (as shown in broken line) which can advantageously be secured to the ground opposite the wind shield 95. That is, the wind shield may be independent of the assembly.

The construction of the shield in any case advantageously allows passage of wind therethrough at least to some extent to prevent the assembly from being blown out of position and/or blown away. This may be achieved by providing a multitude of flaps in the material of the shield which can be blown open under excessive wind conditions. Alternatively, small wind-socks or other arrangements may be used to achieve this effect. Such arrangements advantageously do not substantially compromise the light-shielding capacity of the shield.

Referring to Figure 10, the assembly 100 includes a first arch support 101a and a second arch support 101b. These two supports 101a, 101b are each configured so that they can rotate about each other's axis and so that each is operational and fixable about 180° of rotation. The shield 102 is attached at four points, two on each of the supports 101a, 101b.

As in earlier described embodiments, the shield 102 may be attached within or outside the supports 101a, 101b. The points of connection are movable along each of the supports 101a, 101b so that the shield 102 is positionable depending on the rotation of the supports relative to each other. Thus, in this particular embodiment, the shield 102 may be moveably mounted relative to each of the supports 101a, 101b, but at any instance may be maintained in a fixed position relative to one or both of the supports 101a, 101b. Still further, this embodiment also provides for the attachment of additional arches for shielding from wind or rain, etc. These further attachments may be located within the assembly or may be attached outside the assembly. For example, two assemblies as seen in Figure 10 may be constructed to fit one within the other to provide shielding from both sun and wind. In this case, the two assemblies may be independent of each other or may be a single assembly with two pairs of arches, each arch of a pair having common pivot points on the ground.

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Throughout this specification and the claims which follow, unless the context requires otherwise, the word "comprise", and variations such as "comprises" and "comprising", will be understood to imply the inclusion of a stated integer or group of integers or steps but not the exclusion of any other integer or group of integers or steps.

5

Those skilled in the art will appreciate that the invention described herein is susceptible to variations and modifications other than those specifically described. It is to be understood that the invention includes all such variations and modifications. The invention also includes all of the steps, features, compositions and compounds referred to or indicated
10 in this specification, individually or collectively, and any and all combinations of any two or more of said steps or features.

DATED this 17th day of March, 1999.

15

Hugh William Bramwells

by DAVIES COLLISON CAVE

Patent Attorneys for the Applicant

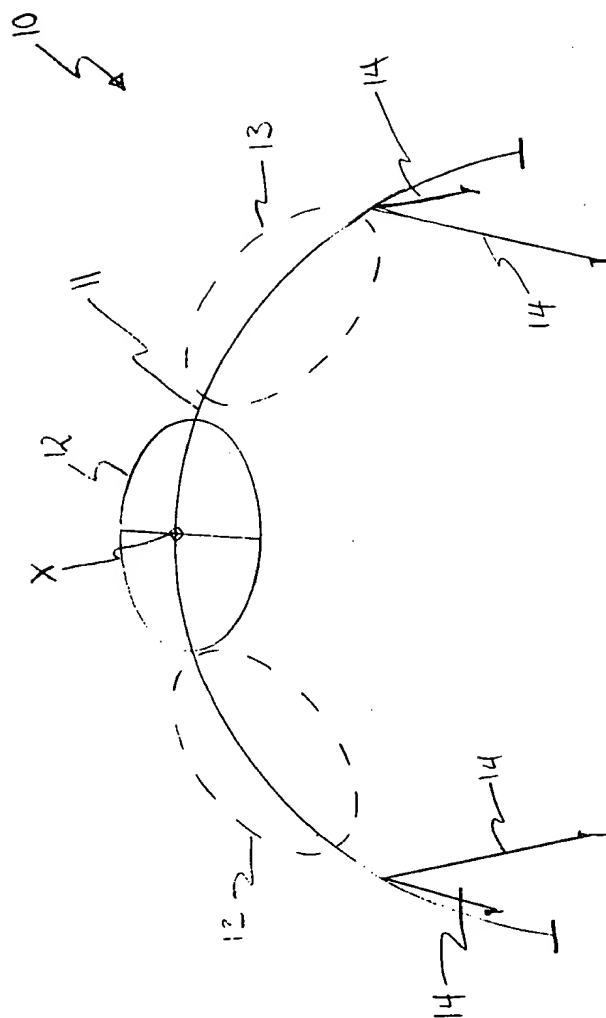


FIG. 1

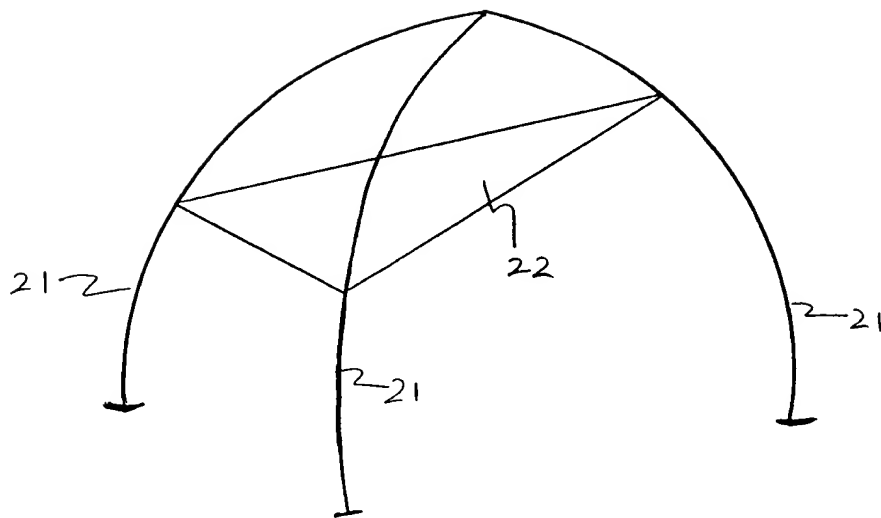
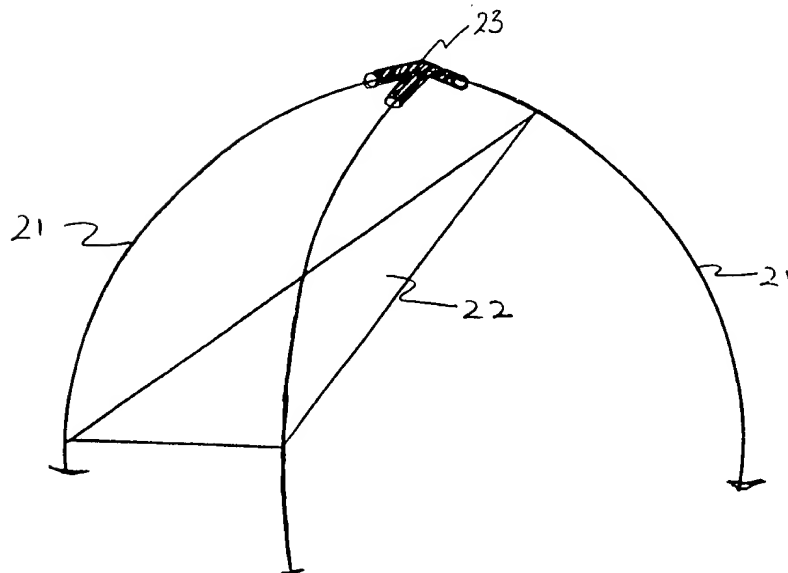


FIG. 2



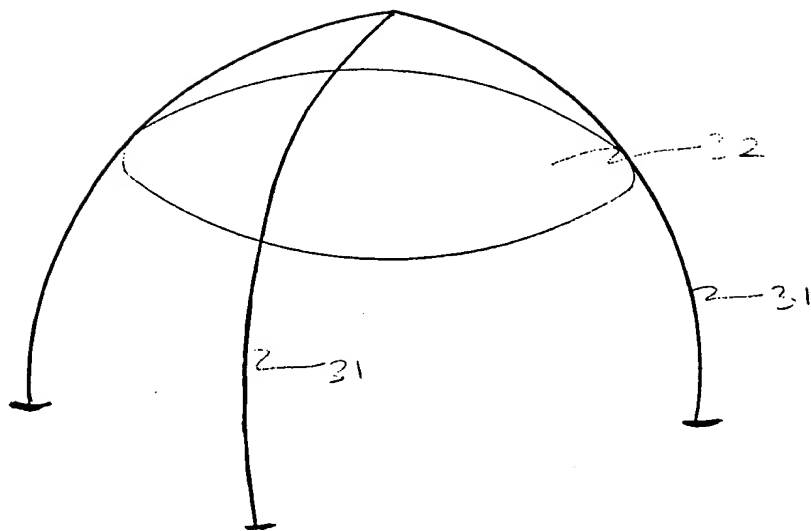
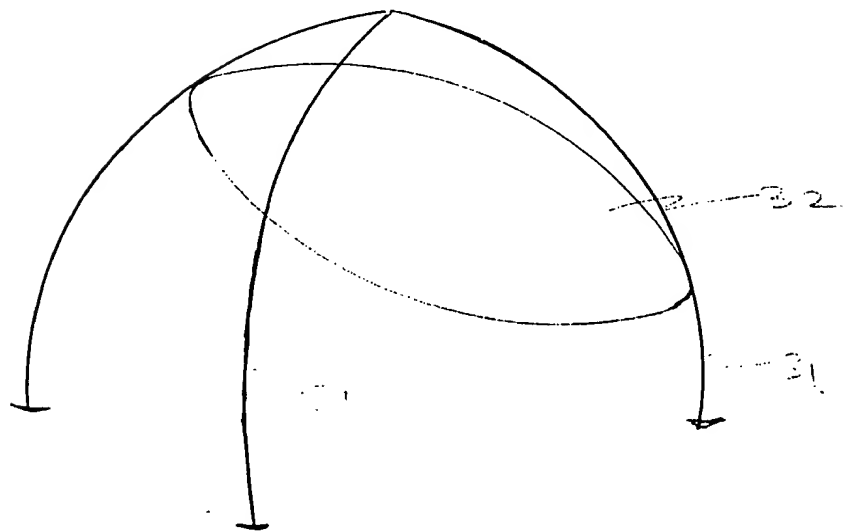


FIG. 3



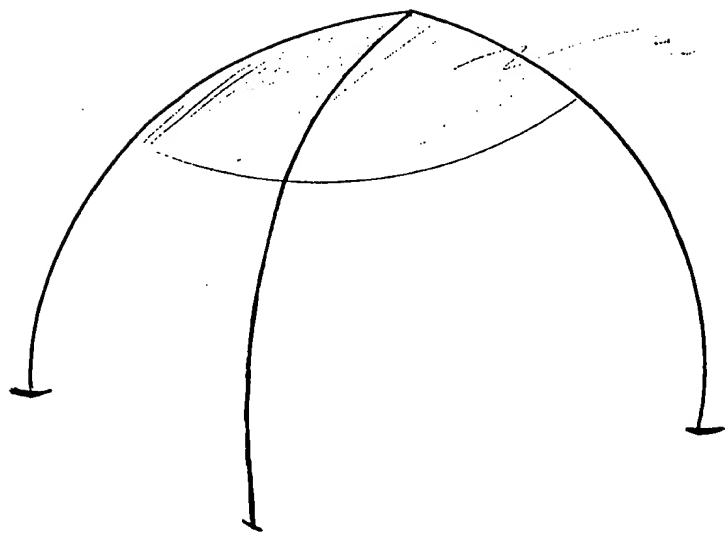
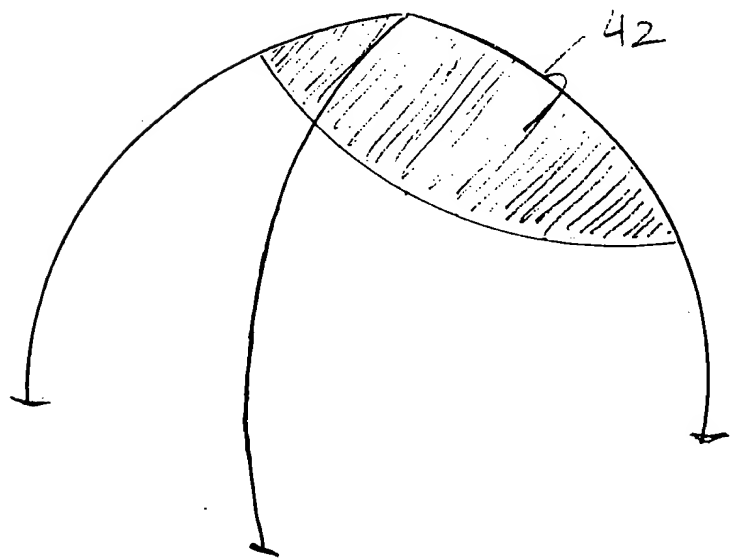


FIG 4.



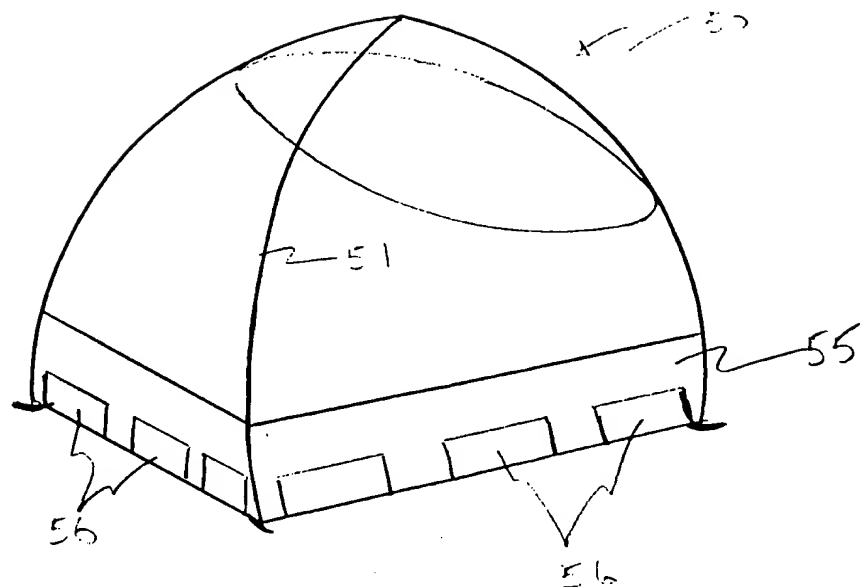


FIG 5.

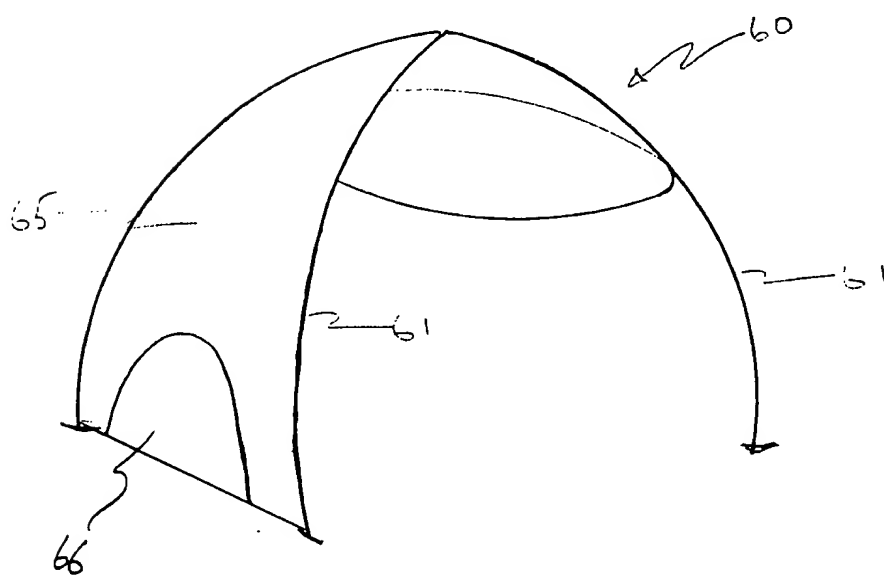


FIG 6.

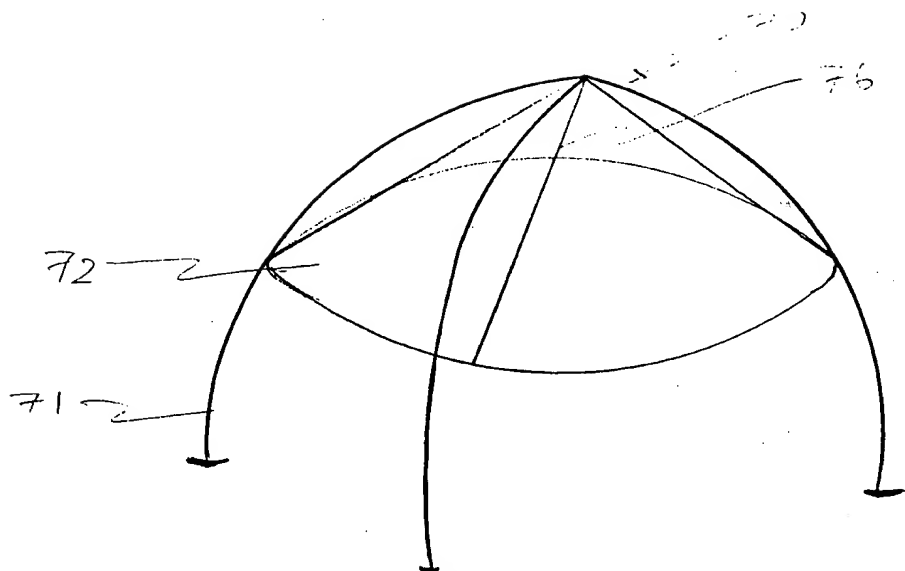


FIG 7.

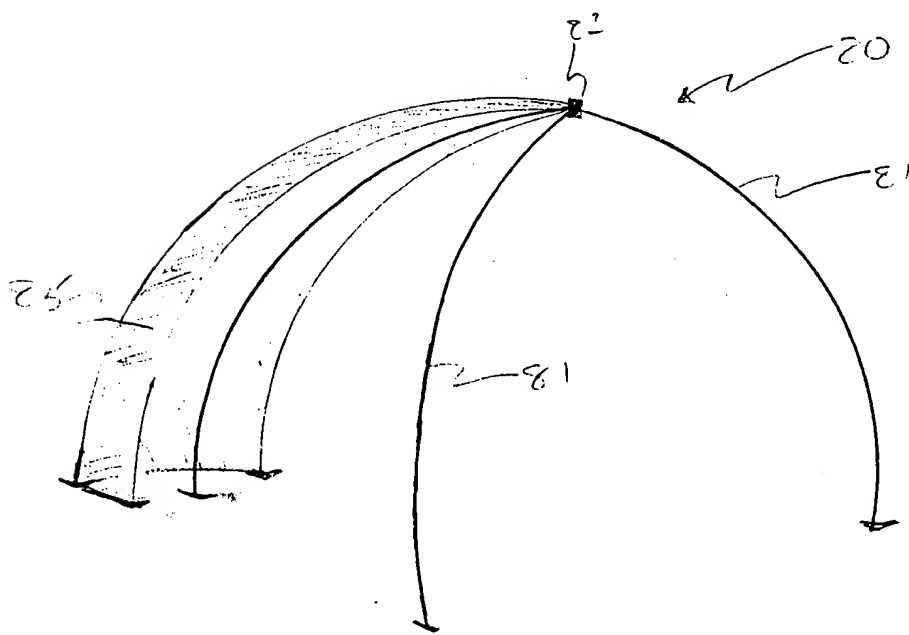
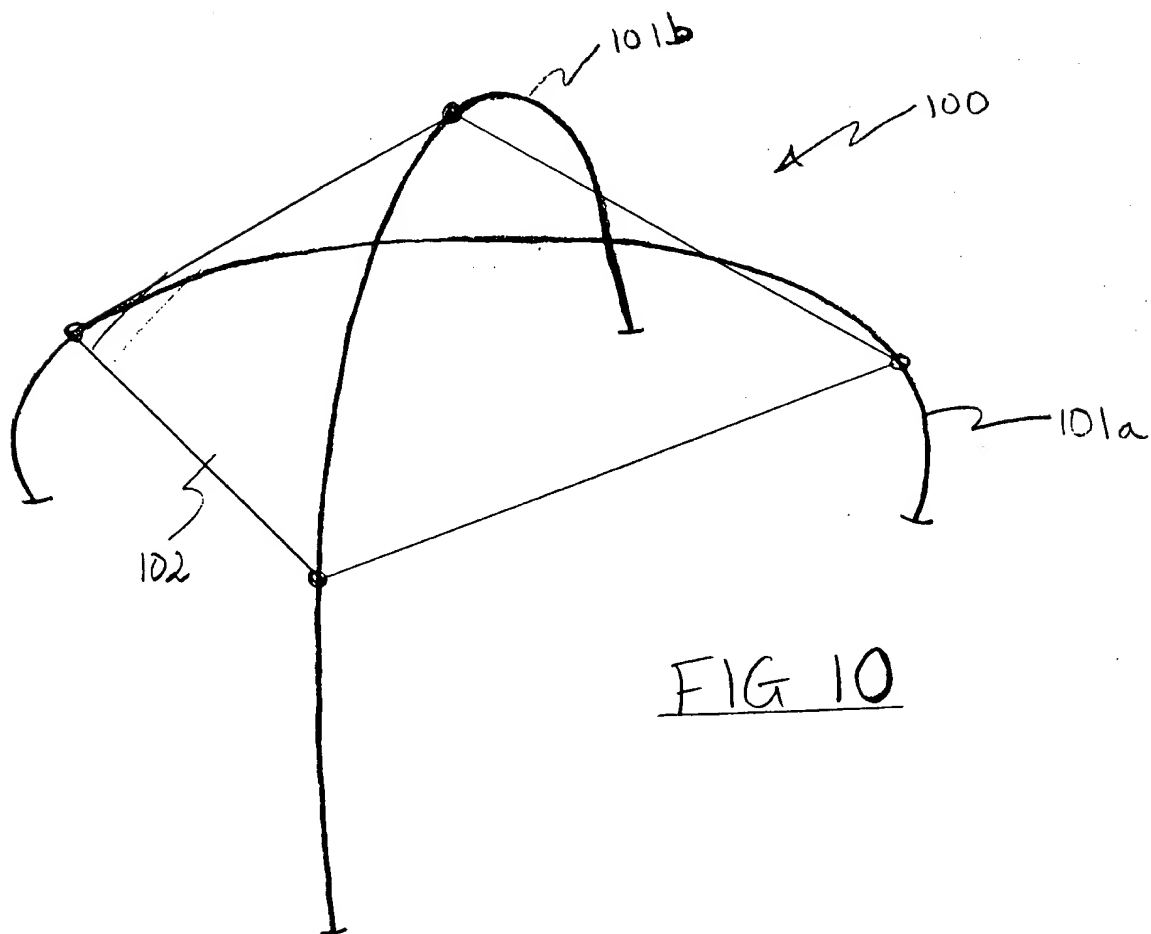
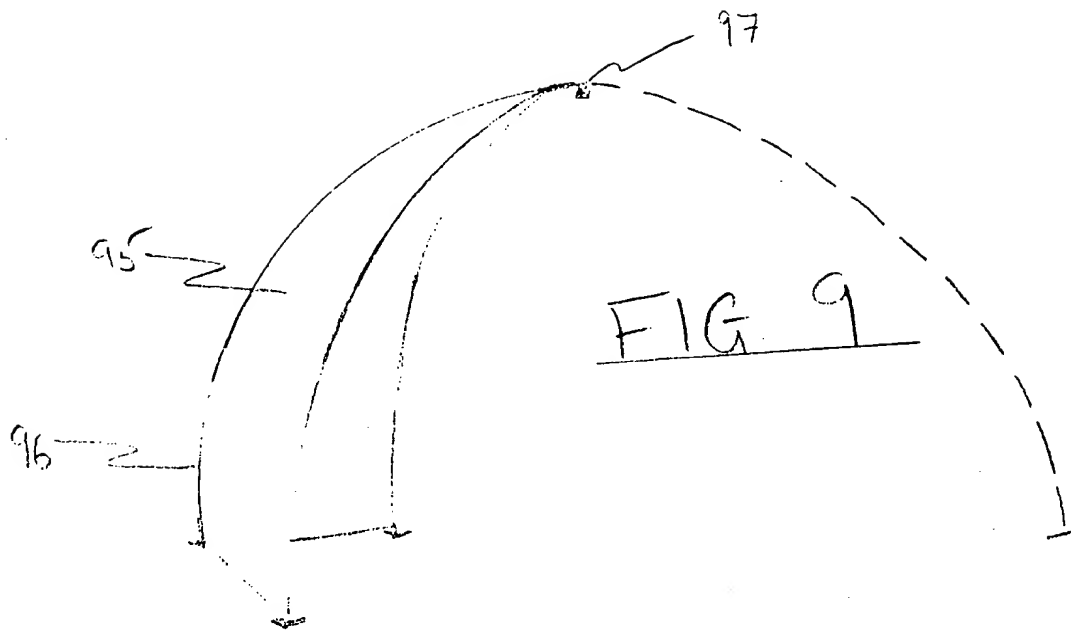


FIG 8.



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